

**REMARKS**

In the present Amendment, the specification has been amended to correct a typographic error. New claim 11 has been added. Section 112 support for claim 11 is found, for example, in claim 1 and at page 4, lines 13-17 of the specification. No new matter has been added, and entry of the Amendment is respectfully requested.

Upon entry of the Amendment, claims 1-11 will be pending.

*Initially, the Examiner is respectfully requested to acknowledge receipt of the certified copies of the priority documents on Form PTOL-326, which the Examiner has indicated at page 2 of the Detailed Action of December 10, 2008.*

In paragraph No. 6 of the Action, claims 1-4 and 8-10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shimamura et al (US 6,090,505) in view of Ehrlich (US 2003/0064291).

Applicant submits that this rejection should be withdrawn because Shimamura et al and Ehrlich do not disclose or render obvious the present invention, either alone or in combination.

In the Amendment filed August 22, 2008, Applicant explained that the “ $\text{Sn}_2\text{Ni}_3$  phase” disclosed at page 4, lines 4 to 7 of the specification is not cited as an example of the “Sn phase;” rather, it is cited as an example of “crystalline phases or noncrystalline phases other than  $\text{Sn}_4\text{Ni}_3$  phases and Sn phase.” Therefore, Shimamura et al does not teach or suggest that the alloy contains the  $\text{Sn}_4\text{Ni}_3$  phase and the Sn phase, as required by the present claims.

In response, the Examiner states:

... the features upon which applicant relies (i.e., see p. 4, paragraph 2 of Applicant's Remarks) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

However, Applicant did not intend to call for reading limitations from the specification into the claims. Rather, Applicant was trying to correct the Examiner's misunderstanding that the Sn phase included  $\text{Sn}_2\text{Ni}_3$ .

One of ordinary skill in the art would have readily understood that the "Sn phase" in present claim 1 does not include  $\text{Sn}_2\text{Ni}_3$ , even without reading the disclosure at page 4, lines 4-7 of the specification, for the following reasons.

If "Sn phase" in claim 1 contains  $\text{Sn}_2\text{Ni}_3$ , it would include  $\text{Sn}_4\text{Ni}_3$  as well. Then, every alloy including  $\text{Sn}_4\text{Ni}_3$  phase would always include a Sn phase. Thus, the language "and Sn phase" in the recitation "said alloy contains  $\text{Sn}_4\text{Ni}_3$  phase and Sn phase" of claim 1 would be meaningless to one of ordinary skill in the art in his understanding of that part of claim 1. Accordingly, one of ordinary skill in the art would not have any alternative but to conclude, when reading the recitation "said alloy contains  $\text{Sn}_4\text{Ni}_3$  phase and Sn phase" of claim 1, that "Sn phase" does not include  $\text{Sn}_2\text{Ni}_3$  and  $\text{Sn}_4\text{Ni}_3$ , but indicates a phase consisting almost exclusively of Sn. Therefore, the recitation "Sn phase" in claim 1 indicates a phase consisting almost exclusively of Sn, and does not include  $\text{Sn}_2\text{Ni}_3$  as disclosed by Shimamura. This would be readily apparent to persons skilled in the art upon reading present claim 1. Of course, claims are to be read and interpreted as they would be by persons skilled in the art.

The Examiner further states:

Further, one of ordinary skill in the art would appreciate that the negative active material taught by Shimamura containing 57

atomic % Sn (see Shimamura, Table 2(A), Sample No. 66)  
includes solid phases  $\text{Ni}_3\text{Sn}_4$ ,  $\text{Ni}_3\text{Sn}_2$ , *and a pure Sn phase*  
[emphasis added] (see Ni-Sn (Nickel-Tin) of *Journal of Phase Equilibria and Diffusion*).

However, the negative active material taught by Shimamura does not include a pure Sn phase, as explained below.

It is true that an alloy containing 57 atomic % Sn includes a pure Sn phase if the molten alloy is sufficiently slowly cooled to solidify. However, that is not always true when the alloy is rapidly cooled, since it solidifies before the separation of phases takes place in accordance with the phase diagram.

As the Examiner indicates, if the negative active material taught by Shimamura includes a pure Sn phase, Shimamura would have disclosed  $\text{Ni}_3\text{Sn}_4$ ,  $\text{Ni}_3\text{Sn}_2$  and a pure Sn phase as components of the negative electrode materials. However, Shimamura discloses only  $\text{Ni}_3\text{Sn}_4$  and  $\text{Ni}_3\text{Sn}_2$  as components of the negative electrode materials. This clearly indicates that the negative active material taught by Shimamura does not include a pure Sn phase.

Ehrlich is cited as teaching a negative electrode material comprising about 5 to 90 wt% nickel particles and about 10-95 wt% tin particles (abstract). Ehrlich does not make up for the deficiencies of Shimamura et al.

In view of the above, reconsideration and withdrawal of the §103(a) rejection of claims 1-4 and 8-10 based on Shimamura et al in view of Ehrlich are respectfully requested.

In paragraph No. 7 of the Action, claims 5-7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shimamura et al in view of Ehrlich, and further in view of Tsutsue et al (US 2002/0006548).

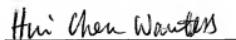
Applicant submits that this rejection should be withdrawn for essentially the same reasons that the previous rejection of claims 1-4 and 8-10 based on Shimamura et al in view of Ehrlich should be withdrawn. Tsutsue et al is cited as teaching a layer of electrode active material mixture having a porosity of 30 to 60% (abstract). Tsutsue et al does not make up for the deficiencies of Shimamura et al and Ehrlich.

New claim 11 is patentable over the cited references for at least the same reasons that claims 1-10 are patentable over the cited references, as discussed above.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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